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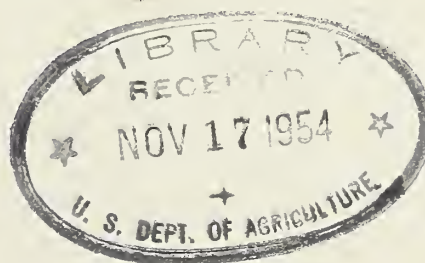
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NUTRITION

and the

U. S. Department of Agriculture



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UNITED STATES DEPARTMENT OF AGRICULTURE
Washington, D.C.

October 1954⁵⁶ (Revised)

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PREFACE

Good nutrition is essential to the health and welfare of a Nation and hence is within the field of public policy. A double challenge comes during periods of international tension or uneasy peace, such as the present. We must continue to improve the nutrition level of our population. At the same time, we must plan for emergencies of possible attack as well as of disaster from natural causes.

The U. S. Department of Agriculture has many-sided responsibilities relating to nutrition -- responsibilities concerned with the production, processing, and marketing of food as well as with human consumption of food and nutrition per se. It fulfills these obligations through extensive research, regulatory, educational, and service programs conducted alone and in association with other Federal and State agencies.

At its 1954 meeting, the Food and Nutrition Research Advisory Committee expects to examine the Department's food and nutrition work as a whole. To facilitate this, the Department's Nutrition Committee has directed the preparation of this report.

The Department's Nutrition Committee (Secretary's Memorandum No. 1299, Revision 1, June 9, 1954) is composed of:

Hazel K. Stiebeling, Director, Human Nutrition and
Home Economics Research, ARS, Chairman

E. C. Elting, Deputy Assistant Administrator for the Office
of Experiment Stations, ARS

Richard B. Bridgforth, Assistant Deputy Administrator for
Production Adjustment, CSS

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FES

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INTRODUCTION

The goal of national nutrition programs is a well-fed population. To attain it, a nation must produce enough food and a proper assortment of food to meet the needs of health within the general framework of food habits and standards. This food supply must be effectively processed and marketed to be available at the times and places needed by consumers and in forms suited to their purposes. Finally, the public must have sufficient information to be able to select foods that will support good health and to use these foods economically and for best nutritional returns.

The role of Government is primarily to facilitate the operation of free enterprise in food production and marketing and of free choice in consumption. It seeks to correct or supplement the operation of the private economy at points where that economy inadequately serves the public interest. The Government's role varies with time and with changing conditions. In normal times its responsibility is minimized. In times of emergency its responsibilities increase as it seeks to reduce the disruptions that might otherwise cause our system of food production, processing, marketing, and consumption to break down to the detriment of the general public. The effect of an emergency situation on the Nation's ability to produce and distribute food, together with the probable duration of the emergency situation, will determine (1) the extent, scope, and type of Government action necessary to insure maximum production and effective distribution, and (2) the necessity for such special food programs as rationing or emergency feeding to meet essential requirements.

Planning for emergencies is part of planning for normal times, and effective action to alleviate distress in emergencies of peace or war will be an extension of, and a modification and intensification of certain normal activities. This report therefore, first describes the current long-term food and nutrition programs which are geared to continuing nutritional protection and improvement. It then points out the nature of some of the stand-by tools and measures for emergency use.

CURRENT LONG-TERM PROGRAMS

To promote effective production, processing, marketing, and consumption of food requires systematic research and education, together with special programs as appropriate. Many groups in this country, both public and private, take an active part in formulating and implementing nutrition programs. 1/

1/ Food and Nutrition Services of Federal and Quasi-Official Agencies of the United States. (Processed) October 1954. Compiled by Human Nutrition Research Branch, Agricultural Research Service.

In developing its research, education, and service programs the Department has the assistance of advisory committees authorized under the Research and Marketing Act of 1946. The Agricultural Research Policy Committee makes recommendations on the broad programs of research and service. Experiment station committees, one on regional problems and one on marketing, assist in Federal-State research coordination. Eighteen committees consult on all aspects of the Department's research and service work that affect particular commodities or groups of commodities. Seven other committees are organized on a functional basis. One of these is a committee on food and nutrition research which met first in 1950 and was given continuing status in 1951.

The Department of Agriculture's continuing activities pertaining to nutrition are discussed in the following pages under five broad categories: (1) research into the use of food for nutrition, (2) assisting consumers to be nutritionally well-informed, (3) producing an adequate food supply, (4) commercial processing, and (5) securing effective marketing and distribution.

RESEARCH INTO THE USE OF FOOD FOR NUTRITION

In agriculture, as in other enterprises, producers, processors, and merchants seek to learn more about their products and their markets. Consumers also want to know more about the products that are available to them. To answer this increasing list of questions, the Department carries on a program of food and nutrition research, much of which is done in cooperation with State agricultural experiment stations and other public and private research groups. The Department, in its research programs, investigates the nutritional contributions various foods make, ways foods can be handled and prepared to retain their nutritive and other qualities, and consumption levels and use of food in the home. It also investigates the nutritional requirements of people and the functions of and interrelations among nutrients. In addition, it undertakes surveys to increase knowledge concerning the levels of food consumption, adequacy of diets, and the state of nutrition in this country.

Composition and Nutritive Value of Foods

Research is conducted on the quantities of nutrients -- proteins and their constituent amino acids, fats, carbohydrates, vitamins, and minerals -- that occur naturally in different foods, the factors causing variations in inherent values, how nutritive values are affected by processing or by conditions to which foods are subjected between the farm and the dining table, how deterioration can be minimized, and how quality can be maintained or enhanced. The Department also investigates the extent to which the nutrients in food as eaten are available in forms that can be used by the human body.

To make the findings readily available the Department compiles tables of the composition and nutritive value of foods, bringing together the data from laboratory research throughout the world. The development of this work illustrates the way our knowledge of the nutritional

constituents of foods has expanded. For example, a report published by the Department in 1896 gave facts about food composition in terms of only 5 constituents, whereas the 1950 edition of food tables covered 14 constituents. Work is now under way toward including additional known nutritive substances in foods, such as amino acids, the newer B vitamins, and additional mineral constituents. Original research and the task of compiling knowledge on the subject will continue in order to provide tables on nutritive value for all foods as eaten, in terms of all nutrients, and to keep the tables revised in the light of scientific advances.

Food Quality and Household Preparation and Preservation

Research is carried on to promote more effective use of foods in home and institutional kitchens through the preservation of wholesomeness, table quality, and nutritive value, and prevention of waste. This includes (1) study of the essential physical qualities and culinary properties of foods -- whether they are established, or new, or experimental varieties and forms -- and the effect of production, processing, and marketing practices on these properties; (2) systematic investigations of the effect of heat, moisture, and other physical or chemical treatments in household processing (cooking, canning, freezing, drying) on the texture, flavor, color, nutritive value, safety, and keeping quality of the resulting product; and (3) incorporation of results of such studies into recipes or procedures for home and institutional use.

Human Nutritional Requirements

Understanding of the relationships between diet and well-being is furthered by studies of the nutritional needs of people. The Department, in cooperation with other research groups, investigates the response of human subjects both to self-selected diets and to intakes that are carefully controlled as to foods and nutrients. This response is measured anthropometrically, physiologically, biochemically, and (in cooperation with health and medical groups) clinically. Such research throws light on human requirements and on the interrelationships of foods and of nutrients. The results are basic to recommendations on the use of food. They also contribute to methods of appraising nutritional status.

Because studies with human subjects usually must be of comparatively short duration, they are supplemented by research that uses experimental animals to obtain clues as to functions of and interrelations among nutrients, and knowledge of the relation of diet to well-being during the entire life-span and over successive generations.

Food Consumption and Nutrition Appraisal

Research, such as that outlined above, is helping describe the nutritional status of selected segments of our population. At present, however, periodic studies in which clinical or biochemical measures of nutritional condition are used are too few to show trends. Trends are now appraised largely on the basis of periodic information on food consumption by the Nation as a whole and by constituent groups of

families and individuals. Translation of this information into terms of specific nutrients consumed gives a basis for estimating the extent to which the food supply and our diets appear to meet nutritional needs.

For each year since 1909 the Department has prepared estimates of the national per capita consumption of each kind of food and the nutrient content of the combined quantities. Such reporting is now part of the Department's continuing statistical service. The estimates provide a basis for measuring trends in consumption of the various foods and for appraising the net effect of shifts in consumption on the nutritive value of the national diet.

Surveys of family food consumption give insight into the distribution of our total food supply among different groups in the population and indicate whether some groups are less well fed than others and how wide the gap is between actual and desirable levels of consumption. Such surveys in which the Department has taken part covered the Nation in 1936 and in 1942, the urban population in 1948, and large segments of the rural population in 1948 and 1952. The Department also has studied food intake of individuals of certain population groups in selected localities or institutions. Analysis of the data provides a basis for estimating the proportion of diets considered nutritionally as good, fair, or poor. Such facts about diet quality have added impetus to efforts to enrich flour and bread, to the National School Lunch Program, and to more vigorous educational programs.

The Department also collects and analyzes statistical data to ascertain the factors that influence trends in food consumption and habits. Such research helps to disclose the "why" of food consumption. Educational and service programs to protect and improve nutrition in this country will be more effective if they are built on a careful evaluation of the economic and social forces that lead people to consume the kinds and quantities of food they do.

Food Budgets, Food Buying, and Meal Planning

Food budgets and suggestions for food buying and meal planning are developed by integrating the findings of research on nutritional requirements and nutritive values of foods and relating these facts to market supplies, food costs, and food habits. These materials are forged into a valuable link between background research and educational programs. A good food budget can outline plans for individual, family, and group feeding that are close enough to current practices to be acceptable and at the same time will result in better nutrition for the money spent. The Department develops and publishes this kind of information in forms that are useful to homemakers and to teachers, extension workers, public health officers, social workers, and others who help families improve their practices in food selection and use.

ASSISTING CONSUMERS TO BE NUTRITIONALLY WELL-INFORMED

The purpose of public education in nutrition is to influence people to choose and use their food wisely in the light of modern nutritional knowledge. The problem is twofold -- to present factual information about food values and nutrition and to present it in such a way that people will be motivated to change their food habits, if that is necessary to achieve better nutrition.

To do their job well, housewives and others who are responsible for planning and preparing the Nation's meals must have sufficient understanding of the basic principles of nutrition to be able to plan properly balanced meals with the money they have to spend and to make good use of available food supplies. They must know how to handle and prepare the foods they select so that the nutritive quality and the attractiveness of foods are retained in the dishes they place on the table.

Nutrition education is carried on through many channels and at different levels -- elementary for children and for many adults, more advanced for persons who have greater background for nutritional understanding. The Department participates in the total program of food and nutrition education by supplying educational materials based on research, by sponsoring programs of its educational agencies, and by cooperating with other Federal agencies that provide food and nutrition services.

Cooperation with Other Agencies

The Department coordinates its activities in nutrition education with those of other Federal agencies through an interagency committee for which the Department provides staff services.

This interagency committee is composed of representatives of the chief Federal and nongovernmental national agencies that provide nutrition services. They include: In the Department of Agriculture, the Human Nutrition and Home Economics Research Branches and the Office of Experiment Stations of the Agricultural Research Service, the Federal Extension Service, and the Agricultural Marketing Service; in the Department of Health, Education and Welfare, the Children's Bureau, the Office of Education, and the Public Health Service; in the Department of the Interior, the Fish and Wildlife Service and the Bureau of Indian Affairs; and the American National Red Cross. The Department's Foreign Agricultural Service and the North American Regional Office of the Food and Agricultural Organization of the United Nations have liaison membership.

This Committee meets monthly to gain common understanding of existing programs and, when desirable, to work jointly on common problems. Recent activities include: a review of methods of nutrition education with provision for continuous evaluation of current methods and devices; the preparation of a statement of goals of school lunch programs; the preparation of a report on Practical Nutrition Programs for inclusion in this Government's 1951 report to the Food and

Agriculture Organization of the United Nations; in 1952, sponsorship with the Department and the Public Health Service of a National Food and Nutrition Institute, with appropriate follow-up; the arrangement of special meetings, along with other interested agencies, to look into resources for combatting misinformation about food and nutrition to which the public is incessantly exposed, methods for improving the nutrition of the aged, and ways for improving the coordination of work with visitors from other countries, including clarification of lines of communication and preparation of needed materials.

The potentialities of coordinated efforts on the part of Federal agencies were recognized as early as 1936. In that year an Inter-departmental Committee on Health and Welfare was established by Presidential order. During succeeding years, its technical subcommittee on nutrition aided in pointing up nutrition problems in this country and in advising on research and other programs related to these problems.

In 1941, because of the complex problems of meeting the conditions of national defense, an Office of Defense and Welfare Services was established to coordinate health and welfare services of the Federal agencies and to assist States and localities in the planning and execution of State and local health and welfare programs. In 1943, this coordinating responsibility with respect to nutrition was transferred to the Department of Agriculture.

Paralleling these developments in coordinated action among Federal agencies were those occurring among the States. By 1941, when the President called a national nutrition conference, nutrition committees or councils had been organized in all States, in Puerto Rico and Hawaii, and in many cities and counties. During World War II, nearly 4,000 committees -- State, county, and local -- were actively at work on nutrition projects and were assisting in the solution of problems of food supply and distribution arising from the unusual conditions of wartime.

The nutrition committees -- which are now active in 35 States, Puerto Rico, and the Virgin Islands, and in a number of counties and cities-- constitute an effective means through which Federal agencies can coordinate their programs with those of State and local groups. Furthermore, the organized resources and facilities of groups represented on State and local nutrition committees provide a channel for sending food and nutrition information direct to communities. In many communities mass feeding manuals have been developed for use in local emergency or as part of the civil defense effort. Leaders have been trained in some areas to prepare and serve emergency meals.

The Department and the interagency committee maintain liaison with the State and local groups through correspondence, through visits when members travel for their own agencies, and through the Nutrition Committee News. This publication is prepared by the Department of Agriculture in consultation with the interagency committee.

Educational Programs of the Department

The Cooperative Extension Service is the educational arm of the Department and the Land-Grant Colleges and Universities. Programs are developed to apply the research findings of the Department and of the colleges to farm and home problems. Professionally trained agricultural and home demonstration agents are located in most rural counties and in some urban centers. Most of these educational programs serve rural people, both adults and youth. Approximately one-third of those influenced by some phase of the program on food and nutrition, however, are urban or suburban families. This number is increasing as programs are developed providing marketing information for consumers and otherwise promoting the utilization of farm products.

Extension teaching of the production and use of food and of nutrition is guided by specialists on the Federal and State Extension staffs. It is designed to help people achieve better living through choosing better diets and planning better meals. Encouragement is given to rural families to produce and conserve all or an economically justifiable portion of the meat, milk, eggs, and assortment of fruits and vegetables needed for their own nutritional well-being.

In certain parts of the country, the educational program has also emphasized increased commercial production of the foods that provide nutrients known to be needed in larger measure in local diets. This work has stressed the production of more dairy and poultry products and the growing of more fruits and vegetables.

Some of the credit programs of the Department also contribute indirectly to nutrition education of farm people. For instance, borrower families are helped to analyze their food needs and are given guidance in meeting them with effective methods of food production and conservation.

Electrification in rural areas, largely advanced by the Department's program, also makes an indirect contribution to better nutrition. Electricity has made better refrigeration and new kitchen equipment possible, which in turn has stimulated interest in improved ways of preparing and conserving food. Homemakers have been quick to make use of farm electricity.

School lunch programs, in the expansion of which the Department has had a part, provide an influential channel for nutrition education. The everyday experience of eating well-planned, well-prepared meals lays the foundation for the formation of good food habits. The welfare of children has such well-recognized appeal that the school lunch is often the focal point in a community nutrition program--the point at which teachers, school health personnel, school lunch staff, parents, and community organizations work together.

PRODUCING AN ADEQUATE FOOD SUPPLY

The Department of Agriculture carries out many programs which have an important bearing on nutrition because of their influence on current and future food supplies.

Planning Production

Each year farmers are confronted with the problem of deciding what they will produce. Many things influence their decisions. Foremost in most cases will be the particular situation on their farms, the crop rotation they follow, their experience with various crops and livestock, their labor and equipment situation, their soils and farm buildings. The Department conducts a significant program of research and education to assist farmers make economic adjustments and bring about better balance between production and market requirements.

The incentives toward changes in production patterns that currently influence farmers in planning are production restrictions and price. Traditionally, price has been considered as the incentive impelling farmers to adjust their production in line with the supply and demand for the things they raise. Both the Department and the States have concentrated a major part of their efforts on informing farmers of the price, supply, and demand outlook for agricultural products. With the advent of Government price supports for agricultural products, acreage and production restrictions have become a necessary part of production planning which must be considered by farmers at times when supplies are greatly in excess of consumption.

Acreage allotments and marketing quotas are currently a major factor in planning production on farms raising certain food and feed crops--wheat, corn, rice, and peanuts. For wheat and peanuts, farmers have voted for restrictions on production and for penalties on other farmers not restricting their production. Farmers failing to hold their acreage within acreage allotments for these crops must pay a penalty on excess production and are ineligible for Government price supports. In the case of corn (and probably rice in 1955) failure to stay within acreage allotments means loss of Government price supports but no other penalty.

Production guides are another governmental influence on a farmer in planning his food production. For vegetable crops, a "guides program" advises farmers of the probable acreage and production which will be needed in the coming year and warns that no Government surplus-removal help can be expected if farmers do not plan production in line with the announced guides. A similar warning in 1954 is credited with holding down potato acreage in the heavy producing areas.

Outlook and situation reports are prepared by the Department and used by Federal and State agencies to help farmers decide how they should plan their production. Rather than relying on positive incentives or penalties, these programs aim to give farmers the information they need to determine what they should do and permit them to make their own decisions.

The "outlook" reports tell of the prospective supply and utilization situation for each product, with some indication of how these factors are expected to influence the price. Where surpluses are obvious, farmers are so advised and warned that failure to cut back production may adversely affect price. New uses and needs for new products are indicated as well as losses of markets resulting from new developments.

The "outlook" work is also used to advise farmers of the supply situation for the things they use, such as labor, machinery, feed, pesticides, fencing, and other supplies. Possible shortages are pointed out to assist farmers in acquiring supplies, scheduling their operations, and avoiding shortage problems.

The explanation of production controls and incentives is a part of "outlook" work and is also a responsibility of the action agencies administering the programs. The "farm planning" work carried on by the State and county extension services representatives and Soil Conservation District technicians helps farmers to apply desired production planning to individual farms.

All of the above mentioned activities assist our farmers to plan their production in line with the needs of the nation.

Improving Production Technology

Outstanding progress made in improving farm production technology has been a major influence in achieving high-level production in this country and in improving the quality of the foods produced. The vigorous continuing program of research on farm production problems, encompassing activities of the Department and the State agricultural experiment stations, is designed to enhance the fund of technical knowledge which can be applied to insure adequate low-cost production of high-quality products and to permit an expanded volume of production as the needs of the Nation's population may demand. This research program is comprehensive in scope, including investigations on soils and fertilizers, agricultural engineering, cultural and management practices for crops and livestock, control of diseases and insect pests, and development of new and improved varieties and strains of plants and animals. Research agencies develop applications of the findings in terms of farming practices and analyze the problems of management involved in integrating such improved methods into profitable systems of farming.

Of particular significance from the nutrition standpoint are the breeding programs with both plants and animals which include in their goals the development of new strains that yield more attractive, palatable, and nutritious products.

Research on the development and use of pesticides which insure adequate protection against the ravages of insects, parasites, and diseases, and at the same time guarantee products which are completely safe from undesirable residues also is of the highest significance.

Demonstrations of production experiments viewed by thousands of farmers in field days across the Nation, and informational reports and bulletins covering the results of research link the research effort to the educational programs designed to put new findings and improved procedures into practice.

Safeguarding Production and Resources

Conservation and development of our resources for agricultural production have increased our productive capacity and are an essential insurance for meeting future needs for food. Over the past 20 years American agriculture has made significant progress in moving away from farming practices that waste resources to those that conserve and develop them. Many programs of the Department have helped farmers put research findings to work and to make this shift possible. The programs under which farmers have been provided technical services in installing soil and water conservation practices and those under which the Government bears part of the cost of installing such practices have had much to do with this progress. In terms of feeding an increased population a generation hence, this combined husbanding and improvement of resources is vital.

Likewise, the programs of the Department designed to prevent serious losses from the introduction and spread of pests and diseases of both plants and animals are of great importance in safeguarding the Nation's food production. Through the maintenance of a small permanent staff and close cooperation with State officials, which permit prompt reporting of the incidence of new pests or diseases which may occur at any location, the Department can establish effective quarantines and organize campaigns to eradicate such outbreaks generally before losses become serious or widespread.

COMMERCIAL PROCESSING OF FOOD

Everyone is conscious of the increased availability of perishable foods through better methods of processing and storage and its aid in making good diets possible throughout the year. Today almost all food products are processed to some extent before reaching the retail store in order to lessen their perishability and to extend the period of their availability. Department research has made notable contributions in this field through the development of new processed products and of improved methods of processing, transportation, and storage.

Food processing is more and more becoming a commercial operation taking place on a large scale in modern food plants. The purpose of the Department's research on food processing is to obtain greater utilization of agricultural products by improving present commercial processing techniques, by evolving new processing methods, by creating new products in convenient, attractive and nutritious forms for greater consumer demand, and by reducing the agricultural product to a concentrated, stable form so that it can be stored economically with a minimum loss of quality and thus aid in extending the marketing period. Attention is also given to reduction in processing costs by such means as new equipment design, more efficient work methods, continuous processing operations, and transforming "wastes" into useful economic products.

SECURING EFFECTIVE MARKETING AND DISTRIBUTION

Food Quality

Maintenance of the wholesomeness and quality of foods as they pass through the processing plant and marketing channels is promoted through the Department's regulatory activities and through research, service, and educational programs.

Marketing research relating to food quality and nutritive value deals with many aspects. Among them are the handling, grading, and packing of products at farm and shipping points; prevention of insect infestation and spoilage of foods in transportation and in storage; improvements in packaging; and use of refrigeration and other methods of protection against deterioration. Educational activities make these research findings available to farmers and market operators. They include demonstration and training work with employees who are actually engaged in handling food and in operating market facilities.

The inspection for wholesomeness of meat and poultry sold in interstate commerce aids in protecting the quality of food reaching consumers. This work is carried on cooperatively with the States and the food industry. The development and promulgation of standards for grades, together with application of these standards in the marketing system, also help to protect the quality of foods.

Market Development, Organization, and Costs

Both the research and the market-information activities of the Department contribute to widening the geographic and seasonal availability of foods. The Crop and Livestock Reporting Board provides essential facts about what is produced, where it is produced or stored, and in what quantity. The Market News program helps to regularize the flow of farm products so that different areas are supplied with such products in amounts commensurate with their needs, and thus prevents simultaneous gluts in some markets and shortages in others.

A substantial part of the marketing research program of the Department is directed to the development of new markets and the analysis of marketing organization, methods, and costs. Food products in new forms developed through utilization research are given market tests to determine their potential place in the market, and consumer preference and merchandizing studies contribute to the forms and methods in which foods are offered to the consumer. More efficient market organization, methods and facilities developed through research contribute to wider availability and improvement in food quality and to reductions in the cost of marketing. Reductions in marketing charges, to the extent that they are passed on to consumers, make increases in food consumption possible.

Distribution Programs

The National School Lunch Program is a major distribution activity. Standards required of schools receiving assistance are: (1) Programs must be operated on a nonprofit basis; (2) meals served must meet specified meal standards, which have been developed by the Department, based on nutritional recommendations of the National Research Council; and (3) needy children unable to pay the full price of the lunch must be served free or at a reduced cost, without discrimination.

The National School Lunch Program has directly assisted in the expansion and improvement of school feeding programs and has stimulated increased efforts in this field on the part of States and local communities. Moreover, through serving adequate noonday meals, schools have an opportunity to effectively teach the principles of good nutrition to, and to develop good food habits among, participating children.

A Special School Milk Program was authorized by the Agricultural Act of 1954 which provides for the use of 50 million dollars annually in 1954-55 and 1955-56 to increase fluid milk consumption in nonprofit schools of high school grade and under. Schools participating in this program are reimbursed for a portion of the cost of additional milk served to children.

A program of food donations, called Direct Distribution, also contributes to improving the quality and the nutritive value of diets of groups with limited food budgets. Since 1935, agricultural legislation has given the Department the authority to donate foods (bought under market-stabilization programs) to nonprofit school lunch programs, to charitable institutions, to families receiving welfare assistance, to needy Indians on reservations, and to other groups in need. Since World War II, nonprofit school lunch programs have received the largest share of these foods.

The Community Food Preservation Program is designed to encourage food preservation in school centers and in tax-supported institutions as a supplement to commercial and home food preservation. Facilities of these schools and institutions are used for conserving local and seasonal foods when they are abundant, thus providing more food for their own use at relatively low cost. The Department maintains a small staff of specialists to assist States to develop such food-preservation programs. States may use part of the Federal grants to Vocational Agriculture for community-canning activities.

For more than a decade the Department has carried on a Plentiful Foods Program designed to increase consumer purchase and use of seasonally abundant and other plentiful foods. It is operated in close cooperation with food wholesalers and retailers, the public-feeding industry, the press and radio, and advertising groups. The merchandising and promotional facilities of these groups are mobilized, on a voluntary basis, in concert with the Department's efforts to increase the purchase and use of foods that are in plentiful supply.

EMERGENCY AND MOBILIZATION FOOD PLANNING

The possibility of sudden changes in a local or the general food supply due to natural disasters or international conflict requires that the Government give continuous attention to advance planning for meeting possible emergencies.

Much of the normal machinery of the Department, such as its procurement and distribution programs, can be adapted to an emergency situation following a natural disaster. Working relationships are maintained with key food distributors in all major markets throughout the country under the Plentiful Foods Program. In times of emergency, these key distributors can keep the Department continuously advised of food shortages or other disruptions in civilian supplies in any market area throughout the country.

The Agricultural Trade Development and Assistance Act of 1954 provides that any farm commodity or farm product owned or controlled by the Government as a result of price supports may be used in relieving distress in connection with major disasters. This new authority supplements the emergency food assistance previously available under the program of Direct Distribution. Foods available for donation under that program may be distributed to any organization providing emergency or disaster relief in this country.

Planning of emergency food programs for use following enemy attack is an extension of programs used to alleviate distress following natural disaster and is being carried out in cooperation with the Federal Civil Defense Administration. The basic objective of this planning, of course, is the maintenance of adequate food supplies in an emergency for attacked or support areas. Planning in this field necessarily starts with the assumption that maximum reliance must be placed upon the established food distribution system of the country, from processor through retail distributor. To gear this distributive system to an emergency situation, local, State, regional, and national authorities are working together and with the food trades industry. However, more study is needed to determine the extent to which it may also be necessary and feasible to supplement normal commercial food supplies with emergency stockpiles strategically located.

Emergency planning also is concerned with the protection of food against contamination by biological and chemical agents. This calls for cooperation between the Department of Agriculture, the Department of Health, Education and Welfare, and the Civil Defense authorities.

The longer range food plans necessary for meeting problems beyond the first emergency of enemy attack are being developed in cooperation with the Office of Defense Mobilization. Among the many responsibilities of the Department of Agriculture in this government-wide mobilization planning is that of undertaking periodic reviews of the estimated requirements for, and supplies of, food under various assumed stages or conditions of mobilization. Among other things,

such reviews indicate where shortages could be expected, the vulnerable points in producing and maintaining an adequate supply of food for our civilians, and the problems that could be expected in securing effective distribution of the available food supply to the civilian population.

As an outgrowth of such reviews, the Department has responsibility for: (a) Recommending needed expansions in agricultural productive capacity and developing programs to obtain such expansions, in order to overcome deficiencies in the mobilization base; (b) protection of crops and livestock from biological and chemical hazards of warfare; (c) cooperation with other departments in correcting apparent deficiencies in food processing or distribution capacity or the capacity of supporting industries such as farm machinery; (d) development of standby plans relating to food allocation and distribution, fertilizer, etc., and (e) cooperation with the Department of Labor and other agencies to insure availability of manpower needed to carry out the food program under mobilization conditions.

The Department also will participate in getting to the public the information needed to facilitate the most effective use of all of the resources of the Nation.

POSTSCRIPT

Advances in scientific knowledge about nutrition are providing an improved basis for consumers in the selection, care, and use of food. Educational programs are taking this information to consumers, awakening widespread interest in the benefits that can be gained by modifying food habits in ways indicated by the science of nutrition. The increased productivity of agriculture and the efficiency of the food-marketing system is placing a generous and varied food supply at the disposal of people. High levels of national income and employment have meant increased purchasing power among consumers, especially in the lower income groups, enabling them to buy and to have better diets. Diets in this country have improved substantially since the mid-thirties.

Our present relatively favorable situation does not mean that public concern for nutrition can afford to slacken. The task is far from done. There is room for improvement in the diets of many families. Moreover, the division of the food supply among groups in the population may change during periods of less favorable supplies or during economic or other emergencies. As continuing research shows the role that nutrition can play in providing increasingly abundant health, our dietary and nutrition standards and programs must be adjusted to meet revised recommendations growing out of the developing science of nutrition.

This report gives an overall review of the current food and nutrition programs of the U. S. Department of Agriculture. The Department's Nutrition Committee hopes that the report will help the Food and Nutrition Research Advisory Committee, and others interested to evaluate the nutrition and related programs of the Department and other agencies, to the end that better programs may be developed, thus safeguarding and improving the nutrition of our Nation's citizens.

